



The Resonator

Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club

Volume 6, Number 2

www.FairLawnARC.org

February 2021

From The President

Dear FLARC Family,

As always, it was great seeing many of you during our last business meeting. Even though we had an early visit from... Mr. Murphy (not the Governor, but, you know... the other guy) and some had problems logging in during the beginning, it was good that all were able to join in later and have our meeting.

I want to take this opportunity to once again congratulate Thom Guida, W2NZ for being our 2020 Frank Leonard W2NPT Memorial Award recipient. Tom throughout the years has demonstrated his love and attention for FLARC.

Last year being somewhat different for all of us and having to adapt to the change we were presented with, our Club was very well alive. We kept our speaker series and Kawfee Tawks

Continued on page 46.

New Member Profile

NAME: John Carbone

CALL: W2USN

What do you do/what did you do for a living?

For over forty years, I have practiced law as an attorney in Ridgewood, NJ. With specialties in governmental law and election law, I represent the New Jersey County Clerks and serve as counsel to three counties. My election law clients range from local and state officials, Governors Kean, Whitman, Cody and Christie, and Presidential campaigns for President Reagan and both Presidents Bush. (No Trump and No Biden!). I have served as a commentator on elections and politics for FOX News, NBC TV, and NPR.

How did you get interested in ham radio?

As did many others, I began in 1959 with SWL on an old RCA radio with internal antenna: VOA, Radio Moscow, BBC, and Australia ... then one Xmas a subscription to Popular Electronics and "Certified" as WPE2FPN ... in 1960 a trip to the radio summit up Rt. 17 to Lafayette Radio for their HE-30 receiver Then a crack at a Heathkit CB lunchbox ... study from an EICO license sheet and "Elmering" from W2OAC (SK) Ed Earnshaw who also gave me my first but not my last catalogue from Fair Radio Sales --- licensed as WB2JFW in 1961 --- added a Hallicrafter's HT-40 with three xtals and then, with my father, erecting a 50 foot mast with an 40M dipole in the yard ... a few years later off to college on an NROTC scholarship ... nearing graduation in 1968 we filled out duty requests for shipboard assignments and I listed Ham Radio as a hobby which changed everything ... I was told "no ship" but instead I would be sent for Officer Communications/Intelligence training - with no explanation why, where stationed, or what I would be doing ... in time I was told that I was assigned to the

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FLARC To Hold VE Testing On February 13th at NEW LOCATION

On February 13, 2021 Fair Lawn Amateur Radio Club will continue amateur radio test sessions on a trial basis. These sessions will be held indoors.

The location is at:

The Masonic Lodge
99 S Maple Avenue
Ridgewood, NJ

NOTE THAT THIS IS A NEW LOCATION!

Covid-19 related incidents will cancel testing.

Prior to Testing:

Send an email to wo2w@arrl.net requesting to book your spot. **Pre-registration is REQUIRED.**

Please Bring With You:

- You **MUST** bring and **WEAR** personal PPE items including a face mask
- 2 pens and 2 pencils. None will be provided to you due to possible virus transmission
- Your FRN number, and (if licensed) a copy of your ham license or a valid CSCE (Certificate of Successful Completion Exam)
- A completed Form 605 (which will be sent to you ahead of your test session, along with your assigned test time.)
- Additionally, the **\$15.00 exam fee**. This is payable in cash (**exact amount is a must**)
- 3 copies of the CSCE form which will be sent to you ahead of your test session

Additional scheduled testing dates are:
March 13, 2021, and April 10, 2021.

FLARC is following government Covid-19 guidance closely and all events will adhere accordingly to the latest advice.



FLARC Announces Outdoor Hamfest For Saturday, April 24, 2021

The club has announced the creation of its first hamfest to be held at the Fair Lawn Recycling Center on Saddle River Road on Saturday, April 24, 2021 with a rain date of .

This replaces our last year's Thanksgiving Friday auction, which was cancelled by the Covid-19 virus.

Details will follow but **please save the date** and **please volunteer** to make this a successful club event.

For questions please contact Gene WO2W at wo2w@arrl.net or Visit our website at www.FairLawnARC.org.

FLARC is following government Covid-19 guidance closely and all events will adhere accordingly to the latest advice.



Fellow FLARC Members,

As we all know, the coronavirus continues to be top of the news and that the club is closed until further notice. Out of an overabundance of caution and our care for your safety, all FLARC events are postponed until further notice due to COVID-19.

Check in on our nightly health and welfare net on the W2NPT repeater at 7:00 PM and let us know how you're doing. You may be isolated at this time but you are not alone. Stay safe!

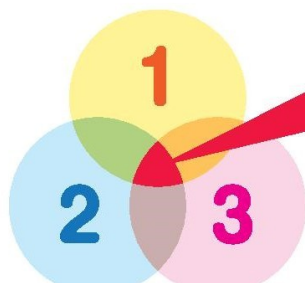
.....
Important notice for preventing COVID-19 outbreaks.
.....

Avoid the “Three Cs”!

- 1. Closed spaces** with poor ventilation.
- 2. Crowded places** with many people nearby.
- 3. Close-contact settings** such as close-range conversations.



.....
One of the key measures against COVID-19 is to prevent occurrence of clusters.
.....
Keep these “Three Cs” from overlapping in daily life.



The risk of occurrence of clusters is particularly high when the “Three Cs” overlap!

In addition to the “Three Cs,” **items used by multiple people** should be cleaned with disinfectant.

Source: www.mhlw.go.jp

Nomar NP4H -- October 2020

The Club Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

2021 Officers, Committees and Assignments

President	Nomar Vizcarrando	NP4H
Vice President	John L. Howard	W2JLH
Treasurer	Bruce Kalogera	NJ2BK
Secretary	Tom McCabe	N2AXX
Trustee	Ed Efchak	WX2R
Trustee	Don Cassarini	K2PD
Trustee	Fred Wawra	W2ABE
Field Day	Steve Wraga	WA2BYX
Member Services	Judith Shaw	KC2LTM
Publicity	Ed Efchak	WX2R
Publicity	Gene Ottenheimer	WO2W
Publicity	Judith Shaw	KC2LTM
Publicity	Susan Frank	W6SKT
Program	Lowell Vant Slot	W2DLT
Publicity	Karl Frank	W2KBF
Publicity	Nomar Vizcarrando (ex officio)	NP4H
Social Media	Dave Marotti	NK2Q
Video/YouTube	Thom Guida	W2NZ
VE Liaison	Gene Ottenheimer	WO2W
VE Liaison	Pete Senesi	KD2BMX
Contests	Lowell Vant Slot	W2DLT
Education	Gordon Beattie	W2TTT
Education	Randy Smith	WU2S
Education	John L. Howard	K2JLH
Education	Fred Wawra	W2ABE
History	Fred Belghaus	W2AAB
Health and Welfare	Judith Shaw	KC2LTM
Photographer	Don Cassarini	N2PRT
W2NPT Trustee	Paul Cornett	W2IP
Technical	Paul Cornett	W2IP
Technical	Randy Smith	WU2S
Technical	Fred Wawra	W2ABE
RACES/ARES Director	Dave Gotlib	KD2MOB
RACES/ARES Liaison	Steve Wraga	WA2BYX
Newsletter Editor	Ed Efchak	WX2R
FL Town Liaison	Gene Ottenheimer	WO2W
Net Scheduler	Brian Cirulnick	KD2KLN
Quartermaster	Brian Cirulnick	KD2KLN

Fair Lawn RACES/ARES Corner



Hello fellow ARES members and friends.

Here we are in the middle of the winter season which makes this time of year an opportune time to practice messaging on a weekly basis. The Fair Lawn Amateur Radio Emergency Service (FL-ARES) group held their weekly nets and practiced messaging, just like every other month.

Hank WA2CCN, DEC of Wayne County ARES was a guest of ours and he provided us with a couple of messaging sessions during January. Hank WA2CCN is a great resource for ARES activities and messaging techniques.

Our Nets are open to all amateur radio enthusiasts. Our ARES members, who are volunteers, are able to assist anyone with answers to questions they may have regarding emergency communications. Also, our Nets include members who are not only a part of Fair Lawn ARES, the nets consist of members from Bergen County ARES, Passaic County ARES, Gloucester County ARES and Wayne County ARES as well.

I would like to thank Aly ALØY for installing VARA FM on the NJ2PC Repeater, located on top of Garret Mountain in Passaic County. We are all invited to connect to the local Winlink Radio Message Server (RMS) ALØY-3 via the NJ2PC Repeater on a frequency of 146.610 MHz using Winlink, VARA FM. The Winlink drills are typically all day on Sundays

Continued on page 5.

Fair Lawn RACES/ARES Corner,

and I would encourage the FL-ARES team and other ARES members to send messages using WinLink. Winlink is a messaging program which encompasses various messaging applications such as Telnet, Packet, VARA HF and VARA FM.

ALØY-3 is one of two Radio Message Servers within 100 miles which has the capability of using VARA FM and ALØY-3 is only 5 miles away from Fair Lawn. Winlink opens up the world to emergency communications. There are many hams who aren't very familiar with Winlink; however with practice, discussions and watching videos, learning comes a long way.

Please note the time of the FL-ARES KB2FLA Nets. They are taking place on Wednesdays at 2000 hours on the FLARC and NJ2BS Repeaters. Please join us every Wednesday for any updates, messages or activities which may take place. We are practicing the operation of Winlink and preparing traffic / messaging for our membership.

We are on the following Repeaters and Echolink: The Fair Lawn ARC Repeater info is: RX 145.47 MHz / TX 144.87, PL Tone 167.9 Hz. Echolink W2NPT-R. The NJ2BS Repeater info is: RX 146.835 MHz / TX 146.235, PL Tone 151.4 Hz. Echolink KD2BKD-L.

Fair Lawn RACES/ARES Corner, cont.

FL-ARES would like to thank the FLARC for the use of its repeater as well as the Venture Crew 73 73 Club for the use of their repeater. We are fortunate to make Fair Lawn and the surrounding communities our home. With our leadership and support from the FLARC we can grow and be of assistance in many community events.

We are always seeking new members to join FL-ARES. Please sign up for various nets and activities taking place at the following email address:

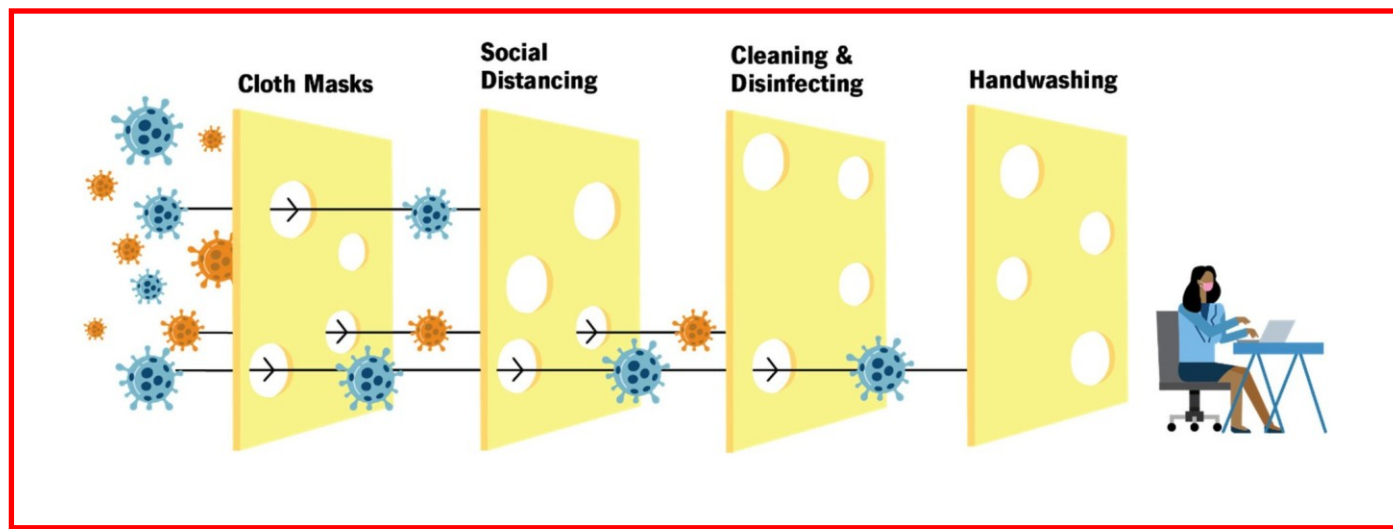
<https://arrl.volunteerhub.com/lp/nnj>

Info on FL-RACES is as follows:

Our next FL-RACES KB2FLR net will take place on Wednesday, February 10th at 2015 hours on the Fair Lawn ARC Repeater as well as the NJ2BS Repeater (frequencies noted above). Thank you to the Fair Lawn Amateur Radio Club for permitting FL-RACES for using the repeater.

FL-RACES has provided the Borough of Fair Lawn OEM with their Annual Report of Activities for 2020. Thank you to all who have made FL-RACES the successful organization that it is. FL-RACES is part of several RACES groups which operate within Bergen County and from time to time has training opportunities with Bergen County RACES.

Continued on page 46.



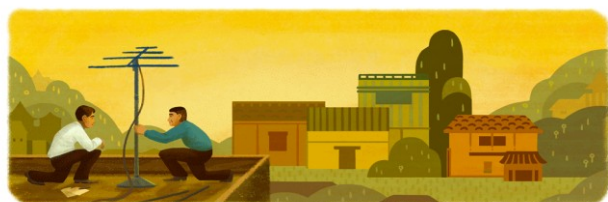
MASTER EVENT CALENDAR

Out of an overabundance of caution and our care for your safety, (not to mention state law)
all FLARC events are postponed or rescheduled until further notice due to COVID-19.

February 18, 2021	FLARC Kawfee Tawk: The FLARC Member Survey Ed Efchak WX2R
March 26, 2021	FLARC Kawfee Tawk: DXpeditions and tips on DXing • NP4G and N200
April 16, 2021	FLARC Kawfee Tawk: The Civil Air Patrol and Ham Radio • WB2ONZ
April 21, 2021	The FLARC Hamfest
TBD	Return Visit To iHeartRadio/WSUS transmitter
TBD	Field Trip to Sarnoff Center, Princeton



More Than A Club... A Community Of Friends!



Hidetsugu Yagi's 130th Birthday Google Doodle

SIG Group Participation as of December 4, 2020

Here is an update on the roster of Special Interest Groups...all groups have increased in size during the last month:

DMR	30
Monitoring	24
DX	14
FT8	16
FLARC General	134

Sign up for a group... or ...
why not start one?

Contact webmaster@FairLawnARC.org
if you would like to start a new
Special Interest Group.

Follow FLARC ON THE WEB

Facebook: <http://facebook.FairLawnARC.org>

Twitter: @FairLawnARC

Blog: <http://blog.FairLawnARC.org>

Youtube: <http://youtube.FairLawnARC.org>

Website: <http://FairLawnARC.org>



The FLARC 2021 Member Survey

2021 FLARC February 18th "Kawfee Tawk" Series

Like the swallows returning to Capistrano, February's monthly speaker topic annually focuses on FLARC and the results of its member survey.

This year's presentation will be Friday, February 18th at 7:30 via Zoom. Stay tuned for the link.

As of press time, 111 members have taken this year's survey. The topics will be:

- attitudes about the club
- directions for 2021 assuming a continued lockdown into the near future
- your operating practices and other thoughts about ham radio and FLARC
- a discussion about the club's direction in 2021

The presenter will be Ed Efchak WX2R, a trustee and Public Information Officer for the club.

Ed in real life is mostly retired but remains president of Customers by Design, a boutique marketing agency. He spent more than 40 years of research, marketing, and strategy planning at North Jersey Media Group, parent company of *The Record* (Bergen County, NJ) and at Belden Research and (later) Belden Interactive. He is a past President of the International Newspaper Marketing Association (INMA), The Newspaper Research Council (NRC), and the National Council on Public Polls (NCPP). He is a member of the New Jersey Advertising *Hall of Fame*.

He is currently a member of the Board of Directors of the New Jersey Press Association and the New Jersey Advertising Club. He is also the Public Information Coordinator for the ARRL NNJ section of the Hudson Division and a member of the ARRL Public Relations Committee.

He was first licensed in 1976 with the call WN2AIV. He later became KB2IKI and then WX2R.

There is still time to complete the survey
if have not yet completed it:

<https://www.surveymonkey.com/r/ZFJF6V8>





AMATEUR RADIO TESTING BY THE FAIR LAWN AMATEUR RADIO CLUB

On February 13, 2021 the Fair Lawn Amateur Radio Club will continue amateur radio test sessions on a modified basis.

These sessions will be held at the **Ridgewood Masonic Lodge.**
The location is at 99 South Maple Avenue, Ridgewood, NJ

The session starts at 9:15 AM.

A document will be provided to you prior to the date to indicate the time assigned to you.
You must have it with you to take the test.

Prior to Testing:

Send an email to wo2w@arrl.net requesting to book your spot.

PRE-REGISTRATION IS REQUIRED - NO WALK-INS ACCEPTED.

Upon Arrival:

You must have a government issued ID such as a valid driver's license or passport, a filled out Form 605, and **3 filled out copies of the FCC CSCE form.**

Please Bring With You:

- You **MUST** bring and **WEAR** personal PPE items including a face mask.
- **2 pens and 2 pencils.** None will be provided to you, due to possible virus transmission.
- Your FRN number, and (if licensed) a copy of your ham license or a valid CSCE (Certificate of Successful Completion Exam).
- Additionally, the **\$15.00 exam fee.** This is payable in cash (exact amount is a must).

- For information and scheduling, please contact:
 - Gene/WO2W
 - WO2W@arrl.net

- Visit our website at www.FairLawnARC.org and <http://bit.ly/FLARC-Testing>

v201226-01

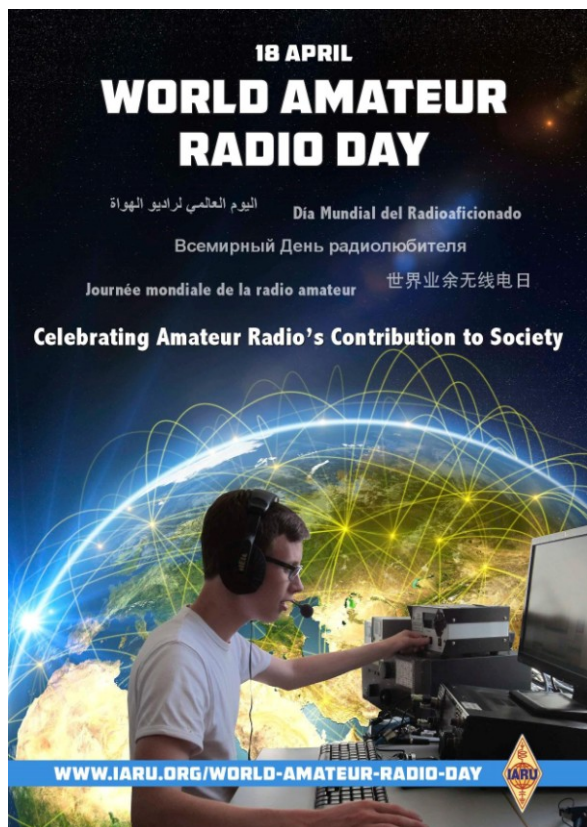
THE GREAT FLARC HAMFEST

Save The Date! April 24, 2021



Special Note: As non-profit, the IRS now requires that we disclose annually the use of paid lobbyists to our members and indicate approximately what percentage of their dues goes toward that. 0% of your 2021 dues payment will be used by the club to directly pay a lobbyist firm to lobby on behalf of all our members regarding pending legislation that impacts our hobby.

World Amateur Radio Day Is Coming!
Save The Date: April 18th!



Please Note: Operating at W2NPT

Starting in January 2019 club trustees have sign-in sheets for all operating positions. There is a clipboard at Operating Position #1, #2 (digital) and #4 with a form on which to sign up for half-hour time slots. No longer first come-first served, in fairness to all who want to use our club equipment and the new antennas. Hopefully some day we will again be able to use our operation positions!

Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

<http://apparel.FairLawnARC.org>
<http://auction.FairLawnARC.org>
<http://blog.FairLawnARC.org>
<http://calendar.FairLawnARC.org>
<http://events.FairLawnARC.org>
<http://exams.FairLawnARC.org>
<http://facebook.FairLawnARC.org>
<http://news.FairLawnARC.org>
<http://swap.FairLawnARC.org>
<http://tech.FairLawnARC.org>
<http://youtube.FairLawnARC.org>

NEW !

<https://groups.io/g/FairLawnARC>



Online License Testing!

Are you looking to get your license or upgrade without leaving your home? All you need is a laptop computer with a video camera.

There are number of sites listed on hamstudy.org/sessions These folks will walk you through taking an exam online.

I have worked with both WB5QNG and AA7HW. If you have any questions, please contact me at mStevenk2sab@gmail.com

73,
Steven Boston K2SAB

February 2021 *Near and Far* Net Controls

Here is the roster for net controls for the upcoming month as reported by Brian KD2KLN:

Date	Net Control
February 1	KD2MOB
February 8	KD2KLN or KD2MOB
February 15	KD2KLN
February 22	N2AAM

But **we need more volunteers to be net controls** - if everyone takes their turn it's less burden on the others. And it's easy.

Volunteer --- don't wait to be asked
(unless you really want to be flattered).

Ham Radio Is Contagious And It Won't Make You Sick!!

UPDATE: FLARC Membership 2016-2021

Our new treasurer Bruck NJ2BK informed us that 2020 closed with 165 paid members, a very slight decrease for the first time since we started counting in our 60th anniversary year. But we've also learned that we've gained some new members in January to keep the total up!!

We are fortunate to have held our membership despite the pandemic and look forward to growing the club in 2021.

Please renew your dues for 2021 now!!

January 1	Paid Members
2021	165
2020	167
2019	145
2018	121
2017	108
2016	78

Club Apparel — Get Them While They're **RED**!

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.

Go to www.hamthreads.com

or visit <http://apparel.FairLawnARC.org>

Check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color.

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.



Ed WX2R at his QTH in Fair Lawn

2020 FLARC Nets On The W2NPT Repeater:

Near and Far Net Mondays at 8PM

Health and Welfare Net Wednesdays at 7PM

W2NPT and NJ2BS Repeaters

Help Wanted

The Publicity Committee is looking for some new members to help continue to improve the marketing and promotion of the club, it's activities and amateur radio. This is an active group so a willingness to participate is a strong plus. Experience in digital marketing and/or public relations is a plus.

Call Ed WX2R at 802-282-6700 or email him at wx2r@arri.net if you're interested.

**Remember:
Ham Radio Is A Contact Sport!**

BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such as gift is worthy.

About The Club

The Resonator is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM, on Zoom for now.

Visitors **ARE ALWAYS** welcome at our meetings.

FLARC operates the W2NPT repeater (145.470-PL 167.9) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has over one hundred fifty paid members. Dues are currently \$25 per year;
\$20 for new members.

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A New Net Is Born!

**The Health and Welfare Umbrella Net
Wednesdays
7PM Local
W2NPT and NJ2BS Repeaters
Open To All**

PUBLICITY COMMITTEE NEWS

The Publicity Committee is seeking new members to help grow the club with its varied activities. Enthusiasm desired... no experience necessary. Contact Ed WX2R or any other committee member.



**FAIR LAWN'S
COMMUNICATIONS CENTER!**
With New Antennas On The Roof!



2020 Near and Far Net Check-In's

Now in its third year, the FLARC *Near and Far* net is chugging along each week. Here is list of our check-ins beginning on New Year's Night in no particular order. Mondays at 8PM on the repeater.

Call	Name
N2AAM	Dave
WO2W	Gene
W2DLT	Van
KD2MOB	Dave
W2JC	Jim
WI2W	Steve
N2SU	Bob
N2OEL	Noel
WX2R	Ed
W2AAB	Fred
KD2KLN	Brian
W2MSA	Noel
W2KBF	Karl
AC2ZU	Charlie
W3EH	George
KC2TBD	Ron
TG9AOR	Joe
N2OEL	Noel
N2JLF	Jim
W2TAB	Tom
KC2TBD	Ron
KA2YRA	Steve
WA2BYX	Steve
KD2BKD	Bob
KC2K	Stan
KA2YRA	Steve
WA2CCN	Hank
W2TTT	Gordon
NJ8Y	Ahmed
NJ2BK	Bruce
W2CQX	Dan
W2KNG	Jim
WK2T	Lee
W2NZ	Thom
K2PD	Don
KD2JIP	Dave
K2ZVL	Van
KC2ASA	Peter
W2AAB	Fred
KD2LRX	Jason
K3DQP	Walt
KD2TVZ	Ed

2019-20 Member Profiles

The year is now complete and here is a list of the 2019 monthly profiles. See past profiles elsewhere in *The Resonator* to check back in the archives to see each featured member's background.

Month	Name	Call Sign
January 2019	Dave	KD2JIP
February	Jim	K2ZO
March	Zach	KC2RSS
April	Bob	N2SU
May	Stan	KC2K
June	Steve	WA2BYX
July	Roger	K2RRB
August	Judith	KC2LTM
September	Chris	W2TU
October	Bob	N2SU
November	Bob	WA2ISE
December	Carol	KD2NMV
January 2020	Gordon	W2TTT
February	Chris	KD2JQZ
March	Glenn	KD2MDR
April	Steve	K2SAB
May	Ahmed	NJ8Y
June	Charlie	AC2ZU
July	Jim	N2JLF
August	Walt	K3DQB
September	Gregg	N2ECH
October	Jim	W2KNG
November	Dave	KD2SGM
December	Bill	NB1ILL

2021 Dues Are Due

Dues for 2021 will be accepted by the club starting on December 4th with the 2020 Annual Meeting. There are no changes to dues for the upcoming year. Cutoff date is March 31, 2021.

Please make checks payable to "Fair Lawn Amateur Radio Club" and send them to

Bruce Kalogera NJ2BK
163 Meadow Lane
Secaucus, NJ 07094

Mail sent to the clubhouse will be delayed due to Covid. See website for other membership options.

Past FLARC Member Profiles

Here is a list of past member features and we welcome your recommendations for new profiles -- including your own.

Month	Name	Call Sign
January 2016	Pete	KB2BMX
February	Marco	KC2ZMA
March	Ron	KC2TBD
April	Kai	K2TRW
May	Larry	WA2ALY
June	Dave	N8MAR
July	Steve	W12W
August	Thom	W2NZ
September	Brian	KD2KLN
October	Brad	KM2C
November	Al	WA2OWL
December	George	W3EH
January 2017	Fred	W2ABE
February	Dave	KD2MOB
March	Randy	WU2S
April	Lee	KD2DRS
May	Gene	WO2W
June	Carol	KD2NMV
July	Kevin	KC2KCC
August	Robert	KD2NOG
September	Robert	KD2BKD
October	John	KD2NRS
November	Fred	W2AAB
December	Margaret	W2GB
January 2018	Brian	KD2OAZ
February	Bennett	KO2OK
March	Van	W2DLT
April	Aly	ALØY
May	Bruce	NJ2BK
June	Dave	N2AAM
July	Karl and Susan	W2KBF and W2SKT
August	Steve	KA2YRA
September	Paul	K2PJC
October	Skip	KD2BRV
November	Jim	W2JC
December	Tom	N2AAX

By the way, Randy (WU2S) has compiled a binder of all back issues of *The Resonator* and it's located in the club office.
Thanks Randy!!!

Blood Donors Needed In This Time Of Emergency

The Red Cross and related organizations are in great need for blood donations since most corporate blood drives have been cancelled.

[Communitybloodservices.com](https://www.communitybloodservices.com) has a network of offices open during the week and would really welcome folks making appointments to donate blood.

Thanks!



American Red Cross

2021 Member Profiles

Here is a list of the 2021 monthly profiles. See past profiles elsewhere in *The Resonator* to check back in the archives to see each featured member's background.

Month	Name	Call Sign
January 2021	Ed	KD2TVT
February	John	W2USN
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

Want to be profiled? Send a note to wx2r@arri.net and you too can become famous!

New Member Profile, continued

Naval Security Group (NAVSECGRU) as part of a classified program with National Security Agency (NSA) ... and now it can be told: I was deployed at sea numerous times in the North Atlantic - many above Svalbard (so far North that we were inducted as "Blue Noses" for working above the arctic circle) monitoring and surveilling Russian ships and bases ... most of my sailor CT operators impressively copied Russian comms and broadcasts in CW "mentally" at over 50 WPM in Russian ...

HF receivers were R-390, R-1051, and WLR-1 with URC-32 SSB xmtrs ... and the antenna farm on the ships was unique, specialized, and expensive; but the reliable ones were simple long wires and one called a "bird cage" (series of caged dipoles) which looked like an Alpha-Delta sloper on steroids ...

Most exciting unclassified intercept was a Russian CW message to Murmansk stating that their ships had lost track of our ship when we went radio/radar emcon silent and slipped away at night ...

Once during a port-call in El Ferrol, Spain (Spain was non-NATO) their naval officers asked us for help in repairing their radios (WWII US Navy surplus RBA, RBB, RBC) ... they had dead tubes and no source for replacements ... I had the US Embassy contact Fair Radio Sales (still love those catalogues) and they sent tubes and replacement radios! ... after the Navy, I stayed active and in 1988 I got my son Chris (KB2LNN) licensed as a Novice through a Gordon West one-weekend course and yes, he taught them the Morse code - stopping class every 30 minutes for a short session ...

I have raced in sailboats to Bermuda using Ham radio (Maritime Mobile suffix always caused a pileup and all we wanted was weather and to give our position information) and also on four summer cruises sailing on tall ships in the Atlantic (HMS Rose, which became a restaurant, and HMS Bounty, later tragically lost at sea in a hurricane) using my highly tricked out Yaesu FT-817 with 50W amplifier and an antenna high in the rigging ...

I have served as a BSA radio merit badge counselor

Continued on page 40.

**FLARC January 16, 2021
VE Testing Results**

With VE testing back on a trial basis, Gene WO2W reports the following results:

Name	Call	License Earned
John Margroff	KD2VNI	Technician
Roy Simpadian	KD2VMX	General
Cody Donovan	KD2VMY	Technician
Andrew Curlik	KB2LMN	Technician
Julio Bermudez	KD2VMZ	Technician
Seth Remuszka	--	Technician
Denton Smith	--	Technician

Testing for February will be indoors, at the Ridgewood Masonic Lodge - with "Covid Restrictions."

See page 2 of this Resonator copy, and also the FLARC website for the latest details.

**Five Special Interest Groups [SIGs]
Already Formed: Any Others?**

We may be in lockdown but there is no lack of club interest. So far, the Radio Monitoring Group has 18 members and we've started a Digital Modes (DMR) group thanks to KD2DRS and NP4H. There is also an FT8 SIG and a POTA SIG headed up by Noel W2MSA.

Other possible groups, from the member survey, include:

- *Radio Propagation*
- *Antennas and how they work*
- *Kit building*
- *Raspberry pi and Arduino and*
- *Ham radio software*

Anyone interested in leading any of these groups... ? Please contact Nomar NP4H.

**Here Comes The Sun
Hello Solar Cycle 25!**



Image from May, 1926 QST, courtesy ARRL

The Way We Were

By Fred Belghaus W2AAB

Receivers I Have Known

Part 3 (Conclusion)

The 1980s marked a new decade for me, and a resurgent interest in SWLing, but not DXing foreign broadcast stations. I was all too familiar with these stations, each one pumping out the official narratives of their host governments, often to the condemnation of certain selected “enemies.”

No state-licensed broadcast entity is likely to challenge the official doctrine of their government, with the result that listeners hear only one side of their stories and, since they are often the only source of information available, believe that they are being told the truth – regardless of contradicting evidence.

So, instead of listening to these voices of official propaganda, I concentrated on non-broadcast stations. These are known as “utility” stations, abbreviated “UTE.” They consist of aircraft, maritime, military, and commercial point-to-point stations, such as international telephone or RTTY networks, diplomatic stations and various types of “mystery” stations like those sending encrypted texts sent as number and letter groups.

All these were generally of interest to me, but most particularly, maritime stations. These were of two types: coast stations, often running tens of kilowatts, and merchant ships, typically running 100 to 200 Watts, equipped with CW, SSB, and RTTY equipment capable of operation on LF and HF.

Small vessels would normally only have VHF FM transceivers, and on somewhat larger vessels, such as large yachts or commercial fishing vessels, VHF FM and HF SSB. I will expand on the topic of marine radio communications in a future column.

I no longer had a separate general coverage HF receiver, so I purchased a couple of inexpensive, imported radios with HF coverage in these bands. The first was a Sony ICF-5900W that I bought used at a now defunct ham and CB radio dealer in Lyndhurst.

The Way We Were, continued.



Sony ICF-5900W
Image: eBay

I didn't know what to expect with this "plastic radio," but I was surprised to find it to be a rather well designed, simple, yet amazingly stable and sensitive receiver.

I think I paid about \$40 for it, with AC power pack. Now, on eBay, they are selling for hundreds of dollars. It had an internal telescoping whip antenna with provision for an external antenna, and a CW/SSB position, so finding the maritime bands was easy. The ships and coast stations operated in the 4, 6, 8, 12, and 16 MHz bands.

The busiest band was 8 MHz. This band was full of CW, with hundreds of ships calling and working coast stations, sending and receiving message traffic. After a traffic list was sent by a coast station, ships would call them frantically to receive their messages. One time in particular stands out in my mind — after a traffic list was sent from WCC (Chatham Radio) on Cape Cod, the 8 MHz maritime band sounded exactly like a DX pileup on the ham bands! Every ship wanted to be first on the list to receive their traffic.

I liked this little receiver, but when Sony introduced a new model, the ICF-2001, and I read the reviews, I had to try one of those, too. So I sold the 5900W and ordered a 2001. Wow. What an amazing little handful of plastic it was!

The Way We Were, continued.



Sony ICF-2001

Image: eBay

The frequency coverage is 150 kHz through 29.999 MHz [1], with frequency selection by keypad entry, rather than by knob tuning. It included a telescoping antenna, and PLL circuitry, with terminals for an external antenna. Like the 5900W, it also copied CW and SSB, with what Sony called a “compensator” adjustment that allowed slight variation of carrier frequency for tuning in SSB or CW signals. There were also “slow” and “fast” frequency change buttons, so that you could enter a frequency like 14000 kHz, then “scroll” up the band or down in steps, to tune the band or move from one band to another adjacent band. On this receiver, I logged many ship and coast stations, as well as military and aircraft stations, along with plenty of “number” stations and clandestine networks using CW. These clandestine networks used 2-letter “call signs” and communicated in Spanish. They were almost certainly from Latin America.

In terms of performance, it was very sensitive and reasonably selective, even with its internal whip antenna; but was also prone to overload by strong signals, especially when an external antenna was used. The volume and tone controls were of the “slider” type, and not terribly robust. When they got noisy, I could discover no way of cleaning them. I ended up giving the ICF-2001 away to one of my cousins. Still, if I found one today in good working condition, and at a reasonable price, I wouldn’t hesitate to buy it. They really are pretty good, and very simple to use.

The Way We Were, continued.

During the 1960s, when I was in college, I had been active in both Fair Lawn Civil Defense RACES, and Air Force MARS. Both had weekly 2 meter nets. The Fair Lawn RACES net was on Wednesdays at 7:00 P.M. local time on 147.180 using AM, with Gonset Communicators (“Gooney Boxes”). The AF MARS net was just below the low end of 2 meters, on 143.95 MHz, AM also. We didn’t handle a lot of traffic on these nets, but most of the time was devoted to training and exercises. In my senior year of college, I resigned from these groups to concentrate on the final year of my studies.

In the early 1980s, I joined NAVMARCORMARS (Navy-Marine Corps. MARS). Our “2 meter” net was also just below the 2 meter band. By now, though, it was on FM, using a repeater system, which I’ve been told was located on Garret Mountain. The Navy-Marine MARS system was very well organized, and we handled a great many messages, using AFSK RTTY. We were issued 28KSR teletypes, but we had to build or buy an appropriate 170 Hertz shift RTTY demodulator. Mine was a Flesher model TU-170. We were also active on HF, on a frequency just above the high end of 75 meters. I believe the frequency was 4043.5 kHz.

As part of the program, we could also receive, on a loan basis, additional equipment. When the list of equipment was offered to us, I didn’t hesitate to request a Collins R-392 receiver – and what a receiver it was!

Imagine a Collins R-390/URR, but squashed into a smaller package, updated and improved, and built to withstand the harshest combat conditions. That’s what the R-392 was. Quite a radio, built like the proverbial brick outhouse.

The R-392 was made between about 1954 and 1962 by many contractors, including Collins Radio, Stewart Warner, Stromberg Carlson, Philco, and Western Electric. It is a superhet, with full frequency coverage from 500 kHz to 32 MHz in 32 bands; triple-conversion below 8 MHz, and double conversion on the higher bands. It is capable of AM, CW, and SSB reception, with selectable bandwidths of 2, 4, and 8 kHz. Unlike the R-390-series, however, it operates on 24 to 28 Volts D.C., so an external power supply is required. Unlike many receivers of this vintage, the R-392 uses slug-tuned coils instead of a ganged, variable capacitor for tuning. The mating transmitter used with the R-392 was the T-195, and both together comprise the AN/GRC-19 equipment. [2]

Note that the frequency readout was the same “mechanical digital” type as used on the R-390 series, with separate counters for Megahertz and kilohertz, thus making the task of tuning somewhat easier for the operator.

The Way We Were, continued.

Collins R-392 receiver
Image: See Note [2]

I never tried the R-392 on the AM broadcast band for DXing, but I concentrated on the maritime and other “utility” band frequencies. It was a great receiver in every important way, and I was able to log additional coast and ship stations, as well as other point-to-point stations with ease. My only regret was in having to return this excellent receiver when I left the Navy-Marine Corps. MARS program, several years later. I wish I had another one!

In the late 1980s, I was tuning the 75 meter phone band one evening when, to my surprise, I heard a strong AM carrier. Switching from the LSB position on my Drake R4C to AM, I was treated to a well modulated, full carrier AM station, making a long-winded transmission not unlike those I heard decades before, in the days when AM was king and SSB was a new, rather unpopular novelty.

The Way We Were, continued.

I continued listening, discovering not only other AM stations, all hanging around 3880 to 3885, but a definite subculture within amateur radio – dedicated to collecting, restoring, and operating vintage transmitters and receivers.

As someone who remembered the days when these classic rigs were the rule, I couldn't help but feel a sense of nostalgia and, I confess, relief from the prevailing narrative that we amateurs are required to use only the "latest and greatest" equipment and fully embrace the latest technological fad. Fads which, by the way, happen to correspond with the biggest, slickest, full-color, double page advertising in amateur radio magazines.

Hearing these classic rigs on the air, lovingly restored and given new life, was very inspiring. There were also quite a few of these operators who had built their transmitters entirely from scratch, even up to the kilowatt level. Not from kits, mind you, but built by studying old Handbooks and magazine articles, then sourcing parts, then building, testing, and sometimes troubleshooting as required, before operating. I had seen some of the stations built by these operators, and I was greatly impressed by the quality of their workmanship, even though some of these amateurs were just recently licensed. (Newbies, take note)!

There was a new publication established, called *Electric Radio* [3] that specialized in the collecting, restoring, building, and operating vintage equipment, both transmitters and receivers. Articles were also devoted to the histories of the great American equipment manufacturers, and the people behind those companies. All this further inspired the historian in me to dig deeper, and learn more.

By 1990, I started going to hamfests again, determined to find, restore, and use some vintage equipment of my own. One of the first items I found was at a B.A.R.A. hamfest, when it was held in the parking lot at Fairleigh Dickinson in Teaneck. What I found there was a very clean looking Hallicrafters SX-71, a receiver I had never previously owned, but that was a clear departure from their usual designs.

The front panel sported separate "slide-rule" type dial faces for both main tuning and band spread adjustment. Complete frequency coverage was 538 kHz through 35 MHz, plus an additional VHF band covering 46 through 56 MHz. [4] First manufactured in 1950, the SX-71 looked like a bargain at the price asked, so I counted out the cash and bought it, feeling proud of myself for getting such a good deal. I drove home with my find and a smile on my face.

The Way We Were, continued.



Hallicrafters SX-71
Image: Universal Radio

But as wise old King Solomon observed, “Pride goeth before destruction, and an haughty spirit before a fall.” I brought the receiver down to my basement shack and workshop, laying it temporarily on its side. A day or so later, my dad went downstairs to look for a tool. He didn’t turn on the light in my half of the basement, though, confident that he would find what he was looking for. From upstairs, I heard a crash, and my heart skipped a beat. Dad uttered a curse, and I flew down the basement stairs to see what had happened. Turning on the light, there was my beautiful SX-71, now lying face down, and dad shaking his head. “Sorry, son, it was an accident.”

Turning the receiver right-side up, my heart sank. The glass on both dials had shattered, and one of the knobs was lying on the floor. The shaft that it had been attached to had been cleanly sheared off flush with the front panel. Oh, NO!

I held my temper, and chalked it up to my own fault, for leaving it where I had. Dad couldn’t have known where it was, so I bit my tongue and swallowed my pride. I later sold it as a “parts rig” at another hamfest. Maybe someday, I’ll find another one.

My next purchase at another hamfest was a Hallicrafters SX-101. Back in the early 1960s, the FLARC club station had the later model - an SX-101A. My memory of that receiver was quite positive, so I took the opportunity to try the earlier model.

The Way We Were, continued.



www.rigpix.com

Hallicrafters SX-101

Image: <https://www.rigpix.com/hallicrafters/sx101.htm>

The SX-101 is a ham band only receiver, covering 160 through 10 meters, capable of reception of AM, CW, and SSB. It was first sold in 1957, for \$395.00. [5]

It worked well enough, but with one annoying flaw. I tried using the receiver one day by operating full break-in on CW. When I initially hit the key on my transmitter while wearing headphones, I nearly jumped out of my skin. There was no AGC (Automatic Gain Control) action in the receiver, and the sound was deafening. Now, maybe it was just a defective AGC circuit, but whatever caused it, it was enough for me to retire that receiver for all but phone operation, and only when using an antenna changeover relay or T/R switch. I lugged the SX-101 to the next hamfest and promptly sold it, equally glad to be rid of it.

One more hamfest, and another receiver followed. This time, it was a low-end, fairly early effort by Hallicrafters, their model S-19R "Sky Buddy." This receiver was for decades the brunt of jokes for its generally poor performance. I recall hearing some contesters from New England boasting on 75 meter SSB about their big signals into Europe, and one of them advised serious operators to be sure they had a big signal on 80 because, he said with a sneer, "Over there (Europe), a 'Sky Buddy' is a luxury."

The Way We Were, continued.



Hallicrafters S-19R "Sky Buddy"
Image: eBay

The "Sky Buddy" was not their lowest price model. That distinction belongs to the model S-14 "Sky Chief," introduced in 1936, and only produced until 1939. [6]

The "Sky Buddy" covered 545 kHz to 44 MHz, CW and AM. [7] The version shown in the picture above was introduced in 1939, a slight variation from its original form as the S-19; the only important differences being cosmetic and the replacement of the Send-Receive slide switch on the S-19 with a more rugged toggle switch on the "R" version. It never was a great receiver, but in the late 1930s, it was often the first receiver a new ham or SWL was able to afford.

Mine needed some restoration. The cabinet needed cleaning and some touching up with black paint. That was easy to fix. The plastic pointer above the main tuning dial was broken off. I made a replacement from some scrap plastic cut to size, and then I scored it in the center. Then I filled in the scored line with indelible black ink. It was a perfect replacement. Someone had replaced the filter capacitors, but I didn't trust trying the receiver before slowly reforming them with a Variac. Starting at about 25 Volts, I slowly increased the voltage to 120, and after this initial "burn-in," the receiver worked as well as it ever could, without the need for further restoration.

It wasn't terribly sensitive or selective, but I could copy AM broadcast stations and some of the hams on 75 meter AM to my satisfaction. It was put on my shelf until

The Way We Were, continued.

I had built an appropriate mating transmitter. After building a simple 6F6 crystal controlled Tri-Tet oscillator rig from a 1946 copy of *QST*, I tried it on the air. After several CQ calls, I got no replies, or none that I could hear, so I put the “Sky Buddy” back on its shelf for awhile.

A month or so later, one of the vintage collectors I had gotten to know, “Doc” WA2IFS, mentioned to me that a friend of his was desperately looking for a “Sky Buddy” to replace the one he had as a kid. I ended up donating mine to “Doc” to give to his friend. Meanwhile, I started building more tube transmitters and regenerative receivers, to keep my building skills in practice. I finally made a QSO on 80 meter CW with the 6F6 Tri-Tet, which ran about 8 Watts output, using a homebrew one tube regenerative receiver built on a wooden cigar box. It was a VE3 station in Ontario. I was proud of that “all homebrew” contact, but the so-and-so never QSL’d.

By this time, I was eager to get on AM phone and join the round-tables in the evening on 75 meters. I had to beef up my old Novice rig, a W.R.L. “Globe Scout” Model 40A, which I hadn’t used in years. Years before, I had disconnected the microphone jack, I forget why; so I had to reconnect it with a high value, ½ Watt resistor in series. After an initial “smoke test,” the transmitter worked fine, so I connected an Argonne AR-57 mike, and tried modulating. Everything looked okay into a dummy load. But now I needed a receiver. I soon found one.

Now, I have to confess — I don’t remember where I found it, but my next receiver was another Collins Radio model, but one not normally used by amateurs. It was their model 51S-1.



Collins 51S-1

Image: https://commons.wikimedia.org/wiki/File:Collins_51S-1_front.JPG

The Way We Were, continued.

Although you'd think this receiver was part of their "S-Line" series, it wasn't. The design, I believe, actually pre-dated them. Although Collins ran a few ads in *QST* for this receiver, it wasn't primarily meant for the amateur market. It was used chiefly by military and government installations.

It was a general coverage receiver, covering 200 kHz through 30 MHz in thirty bands of 1 MHz each. It was triple conversion up to 7 MHz, and double conversion on the higher bands. The sensitivity was specified as 20 microvolts from 200 to 500 kHz; 15 microvolts from 500 kHz to 2 MHz, and 3 microvolts from 2 to 30 MHz. [8] What's interesting is that if you recall our last month's column, the Meissner AM-FM Tuner was rated at a sensitivity of only 10 microvolts on the AM broadcast band. They beat Collins!

Using this receiver was another of those unique experiences. First, like other S-Line type Collins receivers, the tuning dial ran "backwards." By that I mean that as you turned the tuning knob clockwise, the frequency went *down*, not up. For another, the mechanical readout counter only indicated the band in Megahertz, while the calibrated dial beneath it was divided into 1 kilohertz steps. But there was no cursor to precisely line up each step when checking calibration. Also, the audio coming out of this receiver was not very good, at least for AM phone. Using a 10 inch 'Hi-Fi' speaker in a homebrew wooden enclosure, I found the audio was rather high-pitched, if not "tinny." In short, it was a disappointment to me as a receiver aficionado, especially for AM reception.

After trying the "Globe Scout" on AM, and getting good audio reports, I decided that I would prefer a bit more transmitter power. So I relegated the "Globe Scout" to CW operation, and soon found a very nice Johnson Viking II with matching VFO for my AM phone station. I hadn't used one of those since my days at the Fair Lawn High School Amateur Club, and it was a chore to tune up. Each stage had to be separately tuned, but at least it had a pi-network output circuit that could load up into almost any piece of wire from 160 to 10 meters.

The Viking II worked very well on 75 AM, though, and I made many solid, enjoyable contacts with it. One winter night, a roundtable started in the early evening that grew into a "mob" within a couple of hours. Stations were heard from all over the Eastern half of the U.S.A., from Maine to Texas and west to the Dakotas. There were so many stations that you had to wait close to an hour to have the rotation turned over to you. Finally, around midnight, I heard a W5 station drawl, "Ah don't think Fred is in there anymore." He meant me. I went up to bed. What a night for AM!

The Way We Were, continued.

Back to another hamfest, and to yet another receiver. This one was a Hammarlund HQ-110 in near mint condition. The price was right and, displaying my usual lack of resistance to a vintage receiver, I paid the cash and took it home with me. After trying it out, I decided that it was a definite “keeper.” The best performance was on 80 and 40 meters and that was fine with me, because those were the bands with the greatest amount of AM phone activity.



Hammarlund HQ-110

Image: https://antiqueradios.com/gallery/main.php?g2_itemId=33790

This receiver is a somewhat lower-level version of the HQ-170, but still a good choice for vintage operating. I remember many years ago, an old friend of mine from Garfield had one, which he used with a Johnson Invader and a tri-bander on a 40 foot tower, and he worked plenty of DX with this combo using SSB.

The HQ-110 is a 12 tube superhet tuning ham bands only from 160 to 6 meters, AM and CW, although SSB could also be copied quite well. A Q-Multiplier provides selectivity from 100 Hertz to 3 kilohertz, and there is a separate position that could be selected for 6 kilohertz AM reception. The “average” sensitivity is rated at 1.5 microvolts for a 10:1 signal-to-noise ratio. [15]

It worked well on AM and CW, and I was quite pleased with it, although it wasn't in the same league as a 75A-4 or R-392. It became the 'go-to' receiver for my 75 meter AM and CW activities on 80 and 40 meters. In the meantime, I sold the Collins 51S-1 to a Collins collector who had never seen one before, to our mutual satisfaction.

The Way We Were, continued.

My next receiver was for SWling only. This time, I deferred to “modern” technology, but only because I had read some excellent reviews for it in the now (unfortunately) defunct publication *Monitoring Times*. [16] Publication was taken over by *The Spectrum Monitor* [17]. By the way, there is also an online archive of *Monitoring Times* issues from 1982 to 2012, which can be found via the link at Note [18], below.

I drove up to Gilfer Associates in Park Ridge, and bought the new Icom R-71A. This was the most advanced receiver I had owned outside of my amateur activities. The R-71A was state-of-the-art in 1982 or so when I bought it, and it was a good receiver for any type of monitoring on LF through 30 MHz. It had its shortcomings too, but more on that later.



Icom R-71A

Image: <https://wiki.radioreference.com/index.php/File:R71A.jpg>

Frequency coverage was 100 kHz through 30 MHz, general coverage, with reception on AM, CW, and SSB. Frequency was adjustable by knob control or keypad entry, and the readout was digital, using blue LEDs, with resolution to 100 Hertz. There were two independent VFOs, and 32 memory channels. Several filter options were available. I chose 500 Hertz for CW, and 2.4 kHz for SSB/AM. Options included an external voice synthesizer for frequency reading, an infrared remote, and an FM adaptor for HF. [19] It is the first receiver I've ever owned that had CPU control.

I used the R71A mainly for monitoring the HF maritime CW bands, but also several of the maritime SSB frequencies and a lot of “numbers” and clandestine networks on various HF frequencies. All told, I logged more than 1,000 different ships and about 400 coast stations in many DX countries. For 4, 6, and 8 MHz, I used a 40 meter dipole

The Way We Were, continued.

with a simple L network tuner; for 12 and 16 MHz, I built a dedicated quarter wave ground plane for 16 MHz, which worked well on both bands.

Now, as to its shortcomings, there were several. First, I found its performance on the AM broadcast band less than stellar. There was a separate antenna terminal for AM BC and LF, but even with an amplified Palomar ferrite loop, it could not compete with other, tube receivers I had used in the past. It was far worse, for example, than the Collins R-390/URR, the Meissner AM-FM tuner, and even the American Bosch 505, that was made in 1935! I can't account for this deficiency, but it was real enough, and quite disappointing. It was also poor on the LF band, where even with another amplified ferrite loop, it performed worse than a Ray-Jefferson Model 630 marine RDF receiver.



Ray-Jefferson 630 RDF receiver

Image: <https://www.radioworld.com/columns-and-views/rdf-radios-nautical-gems-of-the-past>

Yes, I had also acquired a Ray-Jeff 630, and it was much more sensitive than the R71A on the LF bands. After a number of years, I became re-activated in DXing on the ham bands. The R71A sat in my basement shack and workshop for a year or so, unused. When I set it up again, in hopes of scanning the non-ham bands for some interesting signals... it was dead. Nada. No LED display, no sound, no nothing. So there it sat for a

The Way We Were, continued.

few more years. My interest in ham band DX occupied most of my radio time now, and when the next opportunity came, I brought the R71A to a B.A.R.A. hamfest, hoping to recoup some of the money I'd shelled out for it.

I finally sold it, for far less than its re-sale value, but not before having to practically beg someone to buy it. Sheesh! In retrospect, the problem was probably a dead lithium battery controlling the CPU. Moral: Avoid computer controlled radios, or if you can't, keep them powered up every day... forever.

We are now near the end of our journey among the receivers I have known (and that have known me). The last of my receivers was also one of my best, despite its age; one that I had and enjoyed for a time, then sold against my better judgment, and which, if I ever could find one again, I would gladly re-install in my ham and SWL shack. It's another Hammarlund, their model SP-600-JX-14.



Hammarlund SP-600-JX-14

Image: <http://www.jamminpower.org/SP-600.12.html>

It was sometime in the early 2000s that I found this gem of a receiver. The SP600-JX-14 is a later version of the famous "Super Pro" receivers developed by Hammarlund back in the 1930s, only brought up to date as far as the state of the art allowed in the early 1960s and '70s. It covers 540 kHz to 54 MHz in six bands, receiving AM, CW, and SSB, [9] but without a product detector for SSB. Like other communications receivers primarily designed for military use, these receivers used mostly JAN (Joint Army-Navy)

The Way We Were, continued.

spec components and MIL-T-27 transformers and chokes for increased reliability. Like the other receivers of this type, the SP-600-JX-14 was built for continuous service under adverse conditions, and consequently, they were built to last.

The receiver is single conversion on frequencies below 7.4 MHz, and double conversion above 7.4 MHz; [10] but I never found this to be a significant shortcoming. Only the Collins R-390/URR receiver that I had some thirty years earlier performed somewhat better for DXing on the AM broadcast band.

On the HF bands, it was among the best of its kind, especially for receiving shortwave broadcast stations on AM, or for CW stations on the maritime and ham bands. Another nice feature is that it covers the entire 6 meter band. Compared with the cheaper Hammarlund receivers designed for ham use, the SP-600-JX-14 was definitely more sensitive on that band.

It's a big receiver, like the R-390-series, originally intended for either rack mounting or installation in a suitable cabinet, but that is to be expected for any non-amateur receiver of this type.

There is only one drawback to this receiver, and that is the lack of accurate frequency readout. Its dual analog dial arrangement is basically the same as had been used on Hammarlund receivers since their first similar model, the "Comet Pro," introduced around 1933, with slight variation. The Main Tuning and Band Spread dials on the SP-600-JX-14 are much larger, though, and much easier to read.

The only recommendation I would make to anyone considering purchase of one of these classics, is to also purchase one of the add-on digital readouts available from other sources. Although I make no specific endorsement or recommendation for these products, one example can be found at Note [11].

I enjoyed this receiver for several years in the early 2000s, but an old timer I knew begged to buy it from me, because he had always wanted one, but had never been able to locate one. I capitulated, and sold it to the now very happy old timer, even though I soon regretted it, and regret it to this day. Today, these receivers are selling for more than what I paid for it, and for much more than the price I sold it for to the old timer.

The Way We Were, continued.

I will quote from one vintage receiver collector, commenting on the SP-600-JX-14:

These are amazing receivers. I have two JX14's (the best of the SP-600s IMHO...) that took me 2 years to restore, working in my spare time instead of steadily. I will not part with them for any amount or offer or consider any trade for modern equipment. They have no equal, except maybe for the Collins R-390A, which is another amazing receiver in its own right. [12]

I couldn't have said it better. These receivers, like so many others, have earned the reputation of being "classics" for good reason. It takes little talent for foreign manufacturers to copy or even steal technology that was discovered and developed here, and then build upon it, but the quality and reliability of their efforts leaves a lot to be desired.

If you've never tuned the AM broadcast band or shortwave bands with one of these "classic" receivers, especially one in good working order, when connected to a large speaker, and while using a decent antenna, you cannot fully appreciate the experience, and the unique satisfaction of hearing what good engineering, combined with skilled American workmanship can produce. Try it sometime. It will change your perceptions about what constitutes excellence in receiver manufacturing.

Until next month, and a new topic...

73,

Fred W2AAB

See NOTES on next page ...

The Way We Were, continued.

NOTES

[1] "Sony – Discontinued Portable Radio Receivers," *Universal Radio* catalog, at: <https://www.universal-radio.com/catalog/portable/icf2001.html>

[2] "Collins R-392 US Army Receiver," at: <http://www.heinemoradio.se/us-army-collins-r-392/>

[3] *Electric Radio magazine*. For information and subscription information, please see: <https://www.ermag.com/>

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Around the Shack

Hal Kennedy N4GG/4

Transmit Quality Mica Capacitors

In these days of store-bought gear, articles about components may seem passé. But there is at least one component that comes in handy, costs next to nothing and can be a little hard to find. It is the only component I “hoard,” but I gladly give away my stock to anyone who asks.

I’m speaking of transmit quality mica capacitors.

Figure 1 shows the types most frequently encountered. Figure 2 shows my hoard. Figures 3 and 4 show typical examples where you can see their ratings. Most of these capacitors are rated for several amps and thousands of volts – just what we need for QRO.

What are these good for? Three things I’m aware of. I’ll dispose of the less common application first: As DC blocking capacitors in high power tube amplifiers. The capacitor that couples RF from the plate of an amplifier tube to the output network needs to stand-off high voltage and carry high current.



Figure 1. Several types of transmit-quality mica capacitors

Doorknob capacitors are often seen in this application, but the mica caps in Figure 1 work just as well. But, sadly, who is home-brewing vacuum tube linear amplifiers these days? [There are a few of us repairing them].

The next application is in high power antenna tuners. Some of these are still being home-brewed, and there is lots of work for anyone who can repair the commercially built ones. I can’t think of a ham-related product where the manufacturers “fudge” on ratings more than antenna tuners. There are MANY antenna tuners for sale rated at 1.5 KW that can’t handle that rating. QRO antenna tuners are expensive to build – price can tell you a lot about the true rating of what you are buying. A 1.5 KW antenna tuner that covers 1.8 to 30 MHz and SWR up to, let’s say, 5:1, must use expensive components and will be priced accordingly.



Figure 2. A box full of transmit quality caps at N4GG

Around the Shack, continued

The mica capacitors in Figure 1 are a good component for antenna tuner repair, or for building one from scratch. They typically are far superior in voltage and current handling compared to what you receive when you buy an inexpensive “1.5 KW” tuner. I’ve repaired many over the years and my transmit-quality mica capacitor box is where I head for parts.



Figure 3. A typical QRO mica capacitor.
40 pF, 5 KV peak rating

Here is a sad story. I own two identical store-bought 1.5 KW antenna tuners. They are well made and costly. One day “the magic smoke” came pouring out of one. The failure occurred on 28 MHz at high SWR. Locating the problem was easy. With the cover off a pair of charred disc ceramic capacitors were easy to spot. The repair took a little thought. The schematic identified that capacitor as “C11,” and it was a single capacitor. The parts list included C11 but with a different value. The “as-built” used two capacitors in parallel and neither had a value close to the schematic or to the parts list. The parts list, schematic and actual hardware all had a different “C11.”

Chatting with engineers at the company, they confirmed the design was a little over it’s head on 10 meters with high SWR. They had been experimenting (on production units!) trying to prevent failures. They sent me a replacement cap – which was a doorknob style used in one of their QRO amplifiers.

That fixed the problem – there have been no failures since. But, what about my other, identical tuner? I replaced “C11” (two in parallel, different values yet again) in that one with one of the transmit quality mica capacitors this article is about.



Figure 4. A typical “larger variety” QRO mica cap. 300 pF, 5 KV, 2.7 amp rating.

The voltage and current rating of the cap I installed far exceeded what was needed and the mica dielectric was “the right stuff” for RF.

The third application and the most common one for transmit micas I’ll cover next month. It involves making traps and matching networks at the base of verticals. If you don’t DIY anything else at your shack, you will benefit from knowing how to use a simple L-Network to bring a non-resonant antenna to 50 ohms.

So, where do I get these? I scan every hamfest table for them. There are surplus houses on the web who offer them occasionally. The other place to acquire one is from an old salt like me. Just ask. What do you need?

Around the Shack, continued

These caps are all “surplus” and many date to WW II. “On the shelf” they never go bad. Never. The typical hamfest price is \$1 each, although I once bought a large box of them for \$5 at an average cost of around 20 cents!

They tend to show up in two ranges of values. One range is around 0.01 uF – these are good for vacuum tube coupling caps, but how many of those will you use in a lifetime? I have a few of that value and decline buying more. Even at \$1 each I can’t justify keeping many. I did use one to repair an Alpha 87 linear amplifier about five years ago. I have not needed one since.

The useful ones are in the range of 50 pF to around 1,000 pF (0.001 uF). These values are ideal for antenna tuners, traps and antenna matching networks.

More on that next month.

73,
Hal N4GG/4

P.S. The date on my first license is January 27, 1961.
60 years of fun. Where did the time go?



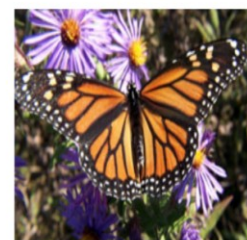
ILLINOIS QSO PARTY 2020

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Ed - itorial :

Déjà vu and Arabian Nights

Sitting here in late January, it seems a lot like last November. Or last July. Or last March.

If we thought that 2021 was going to be dramatically different than “good riddance” 2020, our heads may need an adjustment. Despite the hopes of an effective vaccine, the timing of a “new normal” may differ from what we would like it to be.

A couple of recent news stories indicate that that might be the case:

- Disney has announced that it will not reopen its theme parks until November of this year at the earliest, and that is if the current vaccine rollout schedule holds.
- The Tokyo Olympics are now up in the air.
- The Dayton Hamvention, scheduled for May, has already been cancelled.
- Field Day for June 2021 will look much like Field Day 2020 given the current situation.

This is sobering stuff. 2021 is slipping away before our eyes. A continued lockdown has implications for FLARC. Re-opening the club on even a limited or restrictive basis seems unlikely until the Spring.

Social distancing will change the rules of engagement. Even then, only slightly more than half of our members seemed willing to come back when we asked last Summer, and it was reinforced at our Zoom Annual Meeting in December.

We have stuck together but, in many respects, 2021 will be a greater challenge of keeping our camaraderie than 2020 was.

For example, there is no longer the urgency in a

Ed - itorial, continued.

nightly H&W [Health & Welfare] net and the current Umbrella net suffers from both low weekly attendance and the need for (new) multiple net controls.

The 2021 member survey points out that we need to continue to find alternative ways of maintaining activities to keep overall member interest. On the plus side, there is no shortage of ideas and enthusiasm from many in the survey to attempt to do things given the situation we are faced. But how does it get done?

When I was a pup in management, I was recommended a book called *The Aladdin Factor* by Jack Canfield. One encounters many challenges both in business and in life. But “one” cannot solve them alone. And how?

Canfield’s premise was simple: people **want** to help. All you must do is ask. “Rub the lamp” and you will get what you want. In business. In life. Lots of wishes — not just three.

Our challenge for 2021 will be to get more volunteers involved in the club to continue to create a “remote clubhouse” that keeps us all interested and maintains the culture of FLARC.

Having only a few volunteers “carry the monkey” to help keep the club vibrant only keeps it relatively stable. If the membership wants the club to do more, it must have more members step up and want to do more.

The February annual membership survey meeting will help us all collectively point in the direction of how to keep the membership involved and productive in a pivotal year for the club.

How does that happen? The answer is simple -- It will be time to rub the lamp.

DE Ed WX2R

DMR Special Interest Group Update

FLARC DMR SIG DMR@FairLawnARC.groups.io

A Special Interest Group SIG for those interested in DMR (Digital Mobile Radio) communications and software.

The DMR SIG is going well.

We are still using TalkGroup 310015 on Tuesday evenings at 7:00 to always be done before the NorthStar Digital Net which is at 8:00 pm on TalkGroup 31630.

There are many interesting talks during the DMR net. They include talks about other DMR specialty nets available, to talking about antenna projects people have going on - including portable operation antennas.

We have also talked about using the FLARC DMR TalkGroup to keep in contact during contests and other Field Day events while in the current covid situation.

We hope that FLARC will soon have its own official DMR TalkGroup.

DMR does not need to be expensive or complicated, with the help of the FLARC DMR SIG. For those interested, join in on all the DMR excitement!

Contact Bob H. KD2BKD@optonline.net

for information on joining.

Or just go to the club website

FairLawnARC.org

and use the "Join Special Interest Group(s)" link on left.

DMR Ham Radio.

Digital mobile radio (DMR) is an open digital mobile radio standard defined in the European Telecommunications Standards Institute (ETSI) Standard TS 102 361 parts 1–4 and used in commercial products around the

Radio Monitoring Special Interest Group Update

FLARC Monitoring SIG

monitoring@FairLawnARC.groups.io

A Special Interest Group SIG for those interested in SWL and other radio communications monitoring.

The Night The Ionosphere Broke!

As I sit here writing this article, it is shortly after the FLARC monitoring group's Koffee Tawk featuring the President of Trans World Radio Bonaire. I would like to thank the club members and friends who attended for making our program a success.

This brings to mind an incident from my earliest days as a DXer.

Back in the 60s when I started scanning the bands I naturally became familiar with the regular stations that populated HF and the standard AM broadcast band. WBZ, KDKA, WLS and lots more were nightly visitors at my listening post until one strange night.

It was shortly after sunset when I turned on my shortwave receiver and started tuning the HF bands. Instead of the usual stations, I heard absolutely nothing.

I then switched to the standard broadcast band and received a strange but interesting surprise.

The band landscape had completely changed. I heard all the local stations that I usually received via ground wave. But instead of the usual sky wave visitors, in came a plethora of mostly Spanish language stations plus an absolutely booming signal from Trans World Radio Bonaire. What strange phenomenon was causing this?

At that time I wasn't aware of auroral propagation.

When there is a period of high auroral activity [Northern Lights] signals on HF may become disturbed or be totally obliterated. Signals on the

Continued on page 41.

Stealth Installation of End-fed Antenna + Grounding

Part 2

By Bob Holstrom – KD2BKD

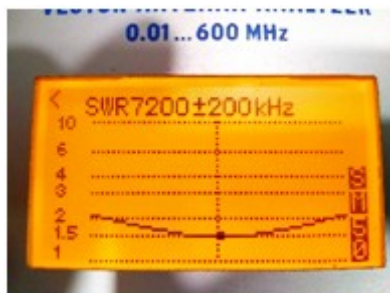


My last article was about mounting the end-fed antenna box and running the coax and ground wiring. More on grounding at the end of this article. This article starts at putting the 134 feet of wires up in the trees.

Up in the trees, I had the tree trimmer put a stainless-steel pulley connected by a stainless-steel cable around a limb of the tree with small stainless-steel carabiner. Around the cable, I slipped over some hose to help protect the trees.

The photo at left shows the wire in red between the 2 trees 80 feet apart. At the soldier's head, 8 feet above ground, is where the end-fed unun box is. The wire goes up to about the 30 feet level then over to the back tree which is also about 30 feet above ground. The wire then comes down at about a 45-degree angle and ends about 15 feet above the ground. That is the complete 134 feet of wire path.

SWR testing was next. Below shows some of the bands tested.



40 Meters



20 Meters



10 Meters

I have also used the internal antenna tuner in my radio to do FT-8 on 6 Meters for JAN VHF contest.

Contacts made so far was a POTA call from Georgia and many local contacts. I am still working on the setup of the radio inside with proper Safety and RF Signal Grounding.

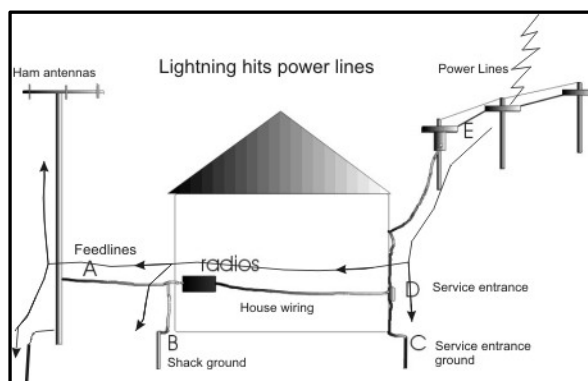
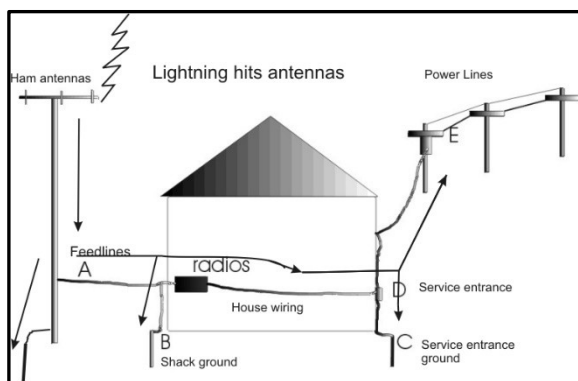
Bob Holstrom – KD2BKD, continued.**GROUNDING & BONDING for Lighting Protection**

Now, after putting up this antenna and the other few antennas I have on the roof, I have been researching how to ground the antennas and radios. I will try to explain why this needs to be done properly.

There are three concerns for grounding:

- Lightning Protection
- Safety from Electrical Shock
- RF Signal Ground

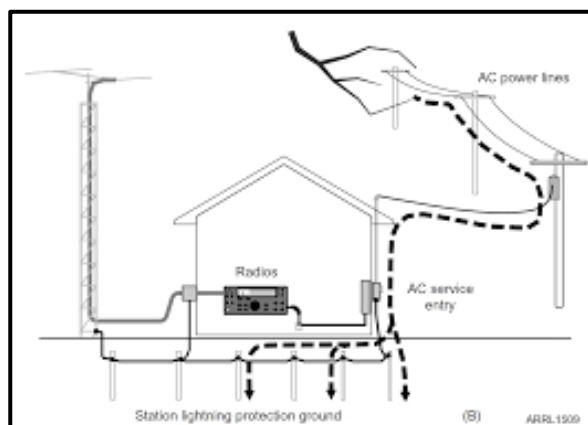
Most everyone has heard that an outdoor permanent antenna installation should have a ground rod. But is this enough? If you just have your antenna with ground rod connected to your radio (even with a lightning arrestor) this will most likely still cause issues if there is a lightning strike to the antenna or the electrical system. The antenna has a good ground connection. Your electric service entrance point should also have a good ground connection. The radio is “in-between” these 2 separated ground systems and it is very possible that it will get zapped by either an antenna or power line strike.



To stop this path between the different grounding systems, all ground rods need to be bonded together with large gauge wire. Look up the electrical code for the gauge of this wire. The groundings should be done with 8 ft 5/8" diameter copper rods buried all the way down 8 ft. The rod can also be put at an angle up to 45 degrees from vertical as per code. The complete rod can also be buried no less than 30" down horizontally. A copper ground plate with 2 feet of surface area (12" x 12") can be used if buried no less than 30 inches deep.

This is a start at talking about grounding on the outside.

Next month I will talk about **RF Signal Grounding** at the radio.



New Member Profile, continued

(Hello, Gordon Beattie) ... now mostly I use an HT on repeaters ... when I “fully retire” I want to purchase the ICOM 7300 and may even pick up a restored R-390A ...

Sorrowfully, when my last ship was decommissioned in Philadelphia we removed over thirty R390/R392 perfectly operational radios – which I had to sign over to the depot on base, to watch as they were just “recycled” as trash!

What parts of the hobby most interest you?

Low power and portable ops with the FT-817 throughout NJ, NY, and PA – did a few SOTA too. On summer weekends, you will find me on the beach with an HT and for SWL listening a wire antenna strung inside the umbrella.

What does belonging to FLARC mean to you? How do you/can you better contribute to the club?

I enjoy and await the monthly newsletter with such interesting content, comments, and instruction. With the new e-mails from the monitoring group this is another valuable service and way to remain involved and participate. Since COVID-19, we all miss the in-person meetings, but this too will change.

What should be the club's priorities in the next year?

The officers and membership are continually and constantly innovating and soliciting input from the members - giving us verve and vibrancy. With the continuing contraction of licensing of amateur radio operators, this club's activities and newsletter outreach are for us successfully bucking that trend and offering opportunities and an active community for new and old licensees. To engender and encourage membership growth, perhaps offer free (no voting privileges) or reduced cost membership for new licensees and reach out to those newly licensed or upgraded with the offer.

New Member Profile, continued

What else can you tell the club about yourself and/or ham radio?

Married for 47 years, two sons who are both Army Officers, and four granddaughters and one grandson. Both my sons - on their varied deployments to Iraq, Afghanistan, and Africa - knew or absorbed enough about radios, antennas, using MUF and LOS to seem to their troops and commanders that they were electrical engineers.

My wife's only complaint with the hobby is “Can you turn that down?” Recently I completed a master's degree in Political Science and commenced another master's degree in Theology.

What other ham related clubs or organizations do you belong to?

After thought and with some reluctance, I did not renew my ARRL membership this year. Unlike the community and value offered by FLARC, in my opinion and which others may disagree, the ARRL appears staid and static and could do better in leadership and promoting amateur radio.



Major Wayne Smith WB2ONZ Discusses “The Civil Air Patrol Communications Program”

The 2021 FLARC *Kawfee Tawk* Speaker Series Continues

The April 16, 2021 FLARC speaker program discusses a critical but often unnoticed part of our communications security infrastructure – The Civil Air Patrol (CAP).

CAP's radio systems are well-prepared to provide contingency communications when commercial communications systems are unavailable or overloaded. CAP holds 15 national voice nets a week on multiple HF frequencies, with close to 120 daily check-ins. All 50 states plus Puerto Rico and the District of Columbia are represented in the national nets. There are many region and state-level HF nets on various schedules. Some areas conduct local VHF nets.

CAP also maintains duty station watch on a national suite of dedicated ALE frequencies, ready for unscheduled relay of internal and external traffic, and they are developing an infrastructure of MilStd 188-110 data communications, which will have HF modems installed at all levels of the organization.

Over 19,000 CAP members are trained in the use of these radio systems, including close to 4,500 holding, or in training for, advanced communications qualifications. Many, but by no means all, are amateur radio operators.

Our speaker will be Major Wayne Smith WB2ONZ, who is the Deputy Group Commander and Communications Officer for Long Island Group, Civil Air Patrol / US Air Force Auxiliary. He manages a volunteer team supporting air and ground based VHF and HF radio communications, supporting Civil Air Patrol missions including:

- Emergency services,
- air search and rescue,
- homeland security and
- cadet programs.

He has more than eleven years of experience in this role. Presentation will be via our Zoom Room.

Radio Monitoring Special Interest Group Update, cont.

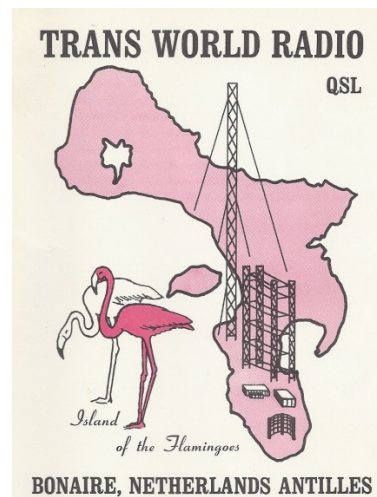
lower frequencies will become drastically attenuated from the direction of the aurora. This leaves the propagation to be only from the south. Since the usual stations aren't present, this allows stations that normally get covered up by the loud standard stuff to come through.

If only I had more knowledge of Spanish I know I could have probably snagged a few rare south and central Americans plus a bunch of stations from the Caribbean.

Today, over 40 years later, the ionosphere still holds lots of surprises and new opportunities to learn about the science of radio — so get on the bands and tune around. You never know what sort of surprises mother nature has to offer.

73 and
good dxing.

Dave N2AAM



FLARC Member Is Recognized In *QST*

ARRL CEO David Minster NA2AA paid a wonderful compliment to FLARC member Bennett Norell KO2OK in the “Second Century” column of the February 2021 issue of *QST*. Minster cited Norell for his passion in helping and bringing together those in the amateur radio community.

Minster called Bennett “a connector” — and all those at FLARC agree. Congrats, Bennett!!

Lauren Libby WØLD Provides A Look Behind Trans World Radio's Short-Wave Success

To a Zoom audience of 61 on January 15th, Lauren Libby WØLD, CEO of the international broadcaster Trans World Radio, gave a comprehensive overview of the superstation, its history, and its ministry to the world. Trans World Radio is the world's most far-reaching Christian radio network.

Highlighting the station's transmitting facilities from Bonaire to Guam to Yerevan and others, we received a behind-the-scenes look at equipment, antennas and feedlines that seemed (and are) larger than life.

Libby outlined the complexity of running stations in far flung places that reach an audience into the millions. His expertise as a ham and business professional made for an informative and special presentation for our group.

The stations broadcast daily in 230 languages to over 175 countries — and they do QSL!!

Questions from the audience ranged from financing (mostly through donations), jamming (mostly on medium wave from China and the DPRK), the slow transition to digital transmission (although AM short wave is still critical to reach geographically isolated audiences).

Libby's appearance at FLARC is part of the **FLARC Radio Monitoring Special Interest Group** which all club members are welcome to join.



February 18th Kawfee Tawk Focuses On The FLARC Member Survey and Growing a Safe and Vibrant Club

Like swallows returning to Capistrano, February's monthly speaker topic annually focuses on FLARC and the annual member survey.

This year's presentation will be Friday, February 18th at 7:30 via Zoom. Stay tuned for the link.

As of press time, 111 members have taken this year's survey. The topics of the talk will be:

- attitudes about the club,
- directions for 2021 assuming a continued lockdown into the near future,
- your operating practices and
- other thoughts about FLARC and ham radio.

The presenter will be Ed Efchak WX2R, a trustee and Public Information Officer for the club.

Ed is president of Customers by Design, a marketing agency. He has spent more than 40 years of research, marketing, and strategy planning experience at North Jersey Media Group, parent company of *The Record* (Bergen County, NJ). He is a past President of the International Newspaper Marketing Association (INMA), The Newspaper Research Council (NRC), and the National Council on Public Polls (NCPP). He is a member of the New Jersey Advertising *Hall of Fame*.

He is currently a member of the New Jersey Press Association and the New Jersey Advertising Club.

He is also currently the Public Information Coordinator for the ARRL NNJ section of the Hudson Division and a member of the ARRL Public Relations Committee.



What Is It? – Answer To Last Month's Question

By: Fred Belghaus W2AAB

This is a so-called “quack medical device,” made around 1930. It is essentially nothing more than an induction coil with connecting wires leading to two attachments that were supposed to provide electrical “treatments” for various ailments.

Some of these were Tesla coils using attachments with small glass tubes with oxygen evacuated, then filled with noble gases, producing violet rays that sent electric plasma discharges when the tubes were applied near the skin.

One of my grandfathers had one like that. It didn't cure his leg sores. It just produced loud, raucous QRM to nearby radios and TV's.



Image: etsy.com

73,

Fred W2AAB

What Is It? – February, 2021

By: Fred Belghaus W2AAB



Image: etsy

What's this? Well, it's an electronic device of some kind with a glass envelope and a vacuum inside the glass. Yes, it's an electron tube of some kind, but *what* kind, and how is it used?

Hint: It would not be used in a ham station, unless at very, very, very high frequencies, and probably not to make a QSO.

Answer next month.

73,

Fred W2AAB



FLARC PortableOps SIG

PortableOps@FairLawnARC.groups.io

This is a Special Interest Group (SIG) for members interested in portable ham radio operation such as POTA, SOTA, IOTA, LOTA, etc.

The purpose of this SIG is to get outdoors and practice our operating skills from different places. We can share outing experiences, tips and work on our operating skills.

WFD + POTA ... alphabet soup in the field

This past weekend was the 24-hour Winter Field Day, so I decided to combine this with POTA [Parks On The Air] activations, making the most of the Field aspect of WFD.

Winter took care of itself with low temps, so I operated from the front seat of my un-insulated vehicle. According to the WFD rules, I was eligible for major bonus points ... 1500 for non-commercial power (my 35Ah SLA was charged prior to the event), 1500 for outside activations (category 1Oscar), and 1500 for operation away from home.

I operated from several POTA sites in the area including the Elk Pen Parking Lot in Southfields NY (a POTA "2-fer" with the Appalachian Trail and Harriman State Park), High Tor State Park in New City NY (home of the "killer rock"), and Pomona NY on the W3R (Washington Rochambeau Revolutionary Trail).

Though I only made 12 WFD QSOs, my score contributed 4,548 points to the Fair Lawn ARC team total as follows:

- 12 SSB QSOs @ 1 point
x 2 (power multiplier for < 100 watts)
x 2 (band/mode multiplier
(20 & 40 meters)
- plus the 4,500 bonus points.

Report from Portable Ops SIG, cont'd

Had to remember MDAS to do the calculations.

[Sequence of operations in math, actually PMDAS ... parenthesis, multiply, divide, add, subtract. Flashback from public school.]

I also made 38 POTA activations, including 6 P2P (Park to Park) QSOs.

WFD rules prohibit self spotting, so I did not self spot until after the WFD contest period was over. POTA allows for self spotting.

Since I do my field logging on paper, it was a little tricky to keep the QSOs separate; though I found some shortcuts to help streamline the paperwork.

In all, I was glad to be able to combine WFD and POTA, though my focus was on POTA. By operating in the field, the club benefited from the bonus points I earned. And my biggest lesson was to be careful around rocks. Gravity is a law, and I follow the law.

[Editor's note: in case you have not heard Steve's "killer rock" story -- as he was stretching out the long wire for his park operation, the killer rock jumped up and dragged him to the ground and chewed a hole in his knee-cap. He spilled a fair amount of blood for the club, but bandaged it up and kept right on operating.]

— Steve Rosman KA2YRA

— • • • —

We are planning to do a POTA activation using the club call W2NPT, within the next month or so. We are going to team operators together and each team will take a shift, to minimize large group gatherings and practice social distancing.

The plan is to activate a park for the day, giving people the opportunity to learn the process of activating a park and enjoying ham radio in the outdoors during the winter months. We recommend anyone who is interested, to join the Portable Ops SIG for further information and future messages.

— Noel Pagan W2MSA

Fair Lawn RACES/ARES Corner, cont.

We will be the Net Control Operating Station for the BC-RACES Net on May 26, 2021 at 7:45 PM and are looking for a Net Control Operator and scribe for the BC-RACES Net.

Thank you to those who have taken part as the Net Control Station in the past. During the COVID-19 pandemic, our monthly briefings take place during the FLARC business meeting. Please join us for the next FL-RACES briefing.

The volunteer efforts of our members are very much appreciated. If you are interested in joining the Fair Lawn RACES, please contact me. Anyone who's a licensed amateur radio operator may join Fair Lawn RACES and there's no residential requirement.

For information regarding Bergen County RACES, please go to

<http://www.bcnjraces.org>

Please be safe and be well. Thank you very much.

73.

David KD2MOB,
Emergency Coordinator FL-ARES and
President FL-RACES



From The President, continued.

present, and Thom never took the pressure off the gas pedal and with a constant "yes, no problem" our presence to the outside world -- through Thom's videos -- were never compromised.

Thom, on behalf of FLARC, thank you for a job ALWAYS well done!

I also want to thank all that participated during Winter Field Day. Our aggregate score was impressive and bottom line, we had fun. A special shout out to Steve, KA2YRA who had a close encounter with a "familiar rock," and was wounded in his POTA/WFD battle – but kept his signal alive. Feel better Steve, and we've gotta get rid of that rock!

With Winter Field Day, FLARC incorporated the use of Slack to communicate with one another during this event, and even after – and in future events. 19 members have signed up. If you want to join us in Slack, join at www.slack.com and look for FLARC - Fair Lawn Amateur Radio Club, or use the following link:

<http://bit.ly/FLARC-Slack>



We'll be back next month with information and hopefully several events we can all work on together.

Don't forget this month's *Kawfee Tawk* with our very own Ed, WX2R – who will discuss the annual club survey and let us know what you are thinking and ways to make our club better... just the way you want it.

Take care, stay safe and healthy
and I'll "see ya' on the radio"...

73,

Nomar, NP4H
FLARC President

Theoretics Demystified

Inductive reactance, what is it?

The word inductance, inductive or induction comes from the early days of radio - as do most of our electronic terms. To induce means to have an effect on something using an outside force. Early serendipitous experiments showed that placing a moving magnet near a wire caused or induced a current to flow in that wire or coil in response to the movements of that local magnet.

In the early days of telephony there were induction coils which were used as transformers in the phone circuitry. I can recall that as a young lad, I spent many hours in the Erie railroad station in Pompton Plains where I was allowed to watch the station master talk to the trains on the railroad telephone. Was told that they used the tracks as part of the circuitry!

The station master had an induction coil that he would place near another coil to talk to the train. (Modulated dc current converted to a varying magnetic field and then back to modulated ac voice which was heard in the earpiece.)

I am sure that there was more to it but you get the idea. Now to the reactance part. If you have a coil of wire and you put an alternating current signal into it, then each turn of the coil will produce a magnetic field which will in turn induce current into the next coil turn and effect what it does to the next turn. This is all dependent on coil diameter, wire size, number of turns, wire turn spacing and the alternating current frequency just to name the basics. Using the engineering formulas coils can be designed to react at specific frequencies.

The reactance part is how the signal of a given frequency reacts to all of the physical parameters of the said coil. The other thing to remember is that every electronic or electrical component has the properties of inductance, capacitance and resistance.

A point to remember is that as the alternating current's frequency increases the inductive reactance increases (it is harder for current to flow).

Theoretics Demystified, continued

This leads us to capacitance and it's reactance properties. Capacitance is the ability of any electrical component to store a charge of electrons on its associated insulator - whether it be air or any other type of insulation.

In a circuit, there is never any flow of electrons across the capacitive barrier but there is an impression of charges on the plates, an electrical field exists between the plates and there is a potential available but there needs to be a loop or part of a circuit to complete the path and that can be the electromagnetic antenna/ground system. Or even the insulation in respect to another conductor at another electrical potential.

To reiterate: The capacitor functions as part of the circuit when it is part of a circuit loop as in a coupling capacitor between audio stages. Again how the capacitor reacts is dependent upon the signal frequency. The higher the frequency, the less reactance there is. In antenna and other radio frequency work when the capacitive and inductive reactance equal each other then you have resonance or you can say that the two reactances cancel each other.

The individual reactances work against each other and cancel each other out. Keep in mind that this is just a simple bare bones explanation of the reactance subject.

A capacitor is also used to store a current charge for a limited time and is therefore used to smooth out the pulsating dc current in a power supply. It fills in the low spots of the pulsating dc with the voltage from the high spots of the pulsating dc. Interestingly an inductor, commonly called a choke, is wound usually on a steel form and is made so that it's inductive reactance also smoothes out the pulsating dc (or ripple - like the ripple on the water when you throw a stone into a pond).

Continued on page 48.

**Fair Lawn Amateur Radio Club
to Help Celebrate
World Amateur Radio Day
on April 18th — Highlighting the
Value of Communication Amid
Isolation**

On the day that commemorates the anniversary of the founding of the International Amateur Radio Union (IARU) in Paris in 1925. The Fair Lawn (NJ) Amateur Radio Club (FLARC) will help celebrate the April 18th event with members operating a series of stations from their homes to demonstrate amateur radio and its value by communicating with fellow "hams" around the world.

This year's theme is "*Amateur Radio: Home but Never Alone*". As the Covid-19 pandemic continues to force global isolation, the amateur radio community has responded positively with activities such as "Wellness Nets" to keep amateurs in touch and check on those who may be higher risk or elderly, special "Stay Safe" special event stations across the globe, and generally higher levels of amateur activity.

Club members are asked to "get on the air" using their call sign but mentioning World Amateur Radio Day and FLARC in their QSO's. If we get a number of volunteers, we can set up a schedule to make sure the club is operating the entire 24 hours of WARD. While any mode is acceptable, we might suggest using voice to help "talk up" WARD.

This is the third year that FLARC will be participating in the event which is run by the IARU with stations operating around the world.

We'll provide more details on the event as April 18th gets closer.

Theoretics Demystified, continued

A common circuit is a power supply with ac in, rectified by diode(s) and a capacitor between the pulsating dc and the ground or zero voltage side with the hot side of the capacitor passed through the inductive choke and then to another capacitor which further smoothes out the resultant dc. This is often called a pi network as it resembles the letter pi (π).

There is also a small capacitor at the output to attenuate any high frequency component that might be present. Again the inductive reactance is determined by frequency. That is why there are many, many different sizes and types of coils.

Another thing is that with the advent of surface mount devices, much of the inductive reactance is eliminated in circuitry as there are basically no component leads to present reactance to the circuitry involved. Things are a far cry from the radios of the 1920s and 1930s! Back in the day we were dealing with long wavelengths compared with today!

Today a Bluetooth antenna is a folded trace on a pc board maybe an inch long if that. If you are using coaxial cable for any purpose, it also has a capacitive factor, which at audio frequencies is relatively unimportant, but at radio frequencies is very important. This is why in some audio equipment you will see audio signal wires running between the parts of the circuitry with just a ground wire running alongside or gently twisted around it.

At radio frequencies, all the factors of capacitive, and inductive reactances are factored into the design equation and the build of the device. As things become more digital or smaller the components shrink even to microscopic size.

I recently picked up an am/fm/shortwave radio the size of a cough drop box and the performance

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In A Nutshell

I have been on the air and having fun TALKING to people on 75 meters and also getting used to my new equipment which is quite different from the old.

For anyone with a new, or new to you, setup or rig as we call it, it takes a while to develop a feeling so you can automatically make changes on the fly.

Now a word about connectors and cables. Do not buy junk! Get the connectors from a manufacturer like Amphenol or similar. Expect to pay a premium but it is worth it, also make sure you can return the product if it initially fails since you are paying a premium. It only takes one intermittent connector or cable to throw you off the air or damage equipment. Besides making you crazy along the way!

Winter is upon us and hopefully short lived and with little snow. Think of it this way, in about seven weeks spring will officially be here and by then we will have daylight savings time again. Along with that there may be more activity on the sun and thereby better propagation.

That word in and of itself can take volumes to explain but suffice it to say that it is the electromagnetic properties of the atmosphere that determine the reflectance of radio waves due to the amount of reflection or absorption of radio waves and the height of the reflecting layer that in combination determine how far one can communicate at a particular frequency!

That was a long sentence almost like the writers of the past! Bottom line: enjoy your

time indoors and meet new friends on the air. The idea is to enjoy and learn from the hobby and to work within your means. There are many with great resources but the real heroes of the hobby are the ones who enjoy communicating with others with what they have.

So if you are new or interested in becoming a ham, contact someone in this or another club and ask questions. It is not as hard as it seems and can lead to a lot of enjoyment and will open up a new world for you! Being on the air is like being in a boat on a lake - same boat, same lake but every trip is different!

Get on the air. You learn and get proficient by doing and do not worry about mistakes, all of us have made them. If not sure what to do, ask someone on the air and almost all will be eager to help you.

Frederick Wawra
W2ABE.

Theoretics Demystified, continued

is remarkable considering that a good part of it is battery and speaker!

No matter what you work with in electronics the knowledge of these electrical laws will help you to realize the importance of how things work together.

Less now are the days of homebrew rigs but it is still possible to design and build equipment and that is where the builder needs to know how to implement electrical laws especially when it comes to antenna design and installation.

So keep learning and doing and stay involved in ham radio.

73,
Fred Wawra, W2ABE

February 2021 FLARC Business Meeting

Secretary's Minutes prepared by Tom McCabe N2AXX
Business Meeting of Feb-5-2021

The meeting was called to order by President, Nomar Vizcarrondo, NP4H via Zoom video teleconference at 7:40 pm and concluded at approximately 9:05 pm.

Pledge of Allegiance was recited at 7:45 pm

President Nomar NP4H and Secretary Tom N2AXX facilitated a roll call and a quorum was established:

- President: Nomar Vizcarrondo, NP4H
- Vice President: John Howard, W2JLH
- Treasurer: Bruce Kalogera, NJ2BK
- Secretary: Tom McCabe, N2AXX
- Trustees (3): Don Cassarini, K2PD
Ed Efchak, WX2R
Fred Wawra, W2ABE

Note: ~ 33 participants attended this Zoom video teleconference

January 2021 FLARC Meeting Minutes were published in the January 2021 edition of The Resonator. A motion to accept the minutes as presented was accepted by Gene WO2W, and seconded by Fred W2ABE.

The treasurer's report was presented by Bruce, NJ2BK, and the motion to accept the financial report was presented and accepted by Skip KD2BRV and seconded by Judith KC2LTM, and accepted by the membership.

Reminder...please remit your 2021 FLARC Membership Dues to Treasurer: Bruce Kalogera, NJ2BK through his QRZ.com address.

Visitors: None

Committee Reports

Technical Report: None

Publicity & Talks:

Ed WX2R reported that 111 FLARC members have responded to the 2021 Club Survey. It's your club so let your voice be heard. Email Ed WX2R@arrl.net if

February 2021 FLARC Business Meeting, continued

you have yet to file your survey and request access to a survey link. Ed will present the results at the Feb-19-2021 Kawfee Tawk.

March 26, 2021 Kawfee Tawk will be a presentation by INDEXA's (International DX Association) Otis NP4G and Bob N2OO on DXing. Join and listen to a great talk on DX-peditions <https://indexa.org/index.html>

April Kawfee Tawk speaker is Wayne WB2ONZ presenting on the Civil Air Patrol.

May and June tentatively have Kawfee Tawks on radio propagation and remote operation.

Mark your calendar... April 18th is the IARU's World Amateur Radio Day! Operate under your call and let's bundle the activity as W2NPT – Fair Lawn ARC <https://www.iaru.org/on-the-air/world-amateur-radio-day/>

Fairlawn Street Fair dates have been set: June 13th and October 17th, 2021. It has not yet been decided if FLARC will participate this year.

Website: Jim, W2JC reports that our website, Kawfee Tawk announcements, Groups I-O, and file sharing are working well. VE Testing dates are posted. No charge for Groups I-O SIGs since FLARC got in early and is grandfathered in at no charge. Special Interest Groups (SIGs) have been very active.

Social Media: Thom W2NZ reports that within the last four weeks there are 19 new FLARC YouTube Channel subscribers and 1,200 views. Thom is in search of information on a Fair Lawn High School video shot about seven years ago about ARISS. Gene and Zach might have additional knowledge for a follow-up.

RACES/ARES: Dave KD2MOB for FLARC ARES/RACES reports two training sessions are now online for viewing in place of classes at the Fair Lawn ambulance corps: 1. Blood Borne Pathogens 2. Hazardous Material and Waste. Dave urged ARES members to complete these half-hour courses.

Continued on next page.

February 2021 FLARC Business Meeting, continued

On May 22nd Fair Lawn will be Net Control for BCRACES (Bergen County RACES)
<https://www.co.bergen.nj.us/emergency-management/r-a-c-e-s>

Bergen County RACES / Fair Lawn ARES / Passaic County ARES will begin a consolidated Net on Wednesday evenings. The official name for the joint operation is TBD.

Red Cross & ARES will conduct a joint drill on May 8th. WinLink technology will be used for messaging.

Winter Field Day: John W2JLH with Fred W2AAB... FLARC membership participation in 2021's Winter Field Day was impressive! <https://www.3830scores.com/reports> 14 FLARC participants with a total of 22,678 points... with Steve KA2YRA and Kevin K2KCC achieving the lion's share of points through their outdoor operation, which gave them lots of Bonus Points. File your log and activity report by March 1st. Contact Fred W2AAB if you have any questions on how to submit your log or 3830scores report.

VE Sessions: Gene, WO2W says VEs are needed! Indoor testing is on and tends to fill up! With thanks to Nomar NP4H, the new testing location is 99 South Maple Avenue, Ridgewood, NJ 07450. Watch the FLARC calendar for dates and times and contact Gene WO2W with any questions. Congratulations to the seven new licensees!

Old Business

Congratulations to Thom Guida W2NZ... recipient of the 2020 3rd Annual Frank Leonard W2NPT Memorial Award. President Nomar NP4H acknowledged Thom's effort and dedication to all things FLARC and that he never says no! Thom is committed to FLARC and strives to unite the members and works tirelessly at the videos and YouTube Channel.

Thom was pleased and "...flattered to be in the same league as Gene WO2W and Karl W2KBF..." (previous recipients of the award.) The actual award is to be presented shortly and was held up due to recent weather events. Congratulations Thom W2NZ.

FLARC Hamfest: Gene WO2W reports the Borough of Fairlawn will provide portable toilets for the Hamfest in

February 2021 FLARC Business Meeting, continued

place of financial support. This will save FLARC hundreds of dollars of expense. Hamfest will be in the DPW Recycling Center parking area on Saturday, April 24th, 2021. Convenient location along Saddle River Road.

Special Interest Groups (SIGs):

- Monitoring: No report
- DMR: Bob, KD2BKD – DMR Talk Group TG310015 traffic discussed our weekly DMR Net Tuesday's at 7 pm. BrandMeister Official Talk Group for FLARC is pending per Nomar NP4H and TG 31347 has been requested of BrandMeister! <https://brandmeister.network/> Support with DMR radios & "Hot Spotting" is available.
- POTA: Noel W2MSA reports a FLARC Club outing at a state park is under serious consideration. The objective is to have fun, get outdoors, and get On the Air with this interesting form of operation.
- DX: John W2JLH reports DX-peditions and special operation remain at a low point due to the global COVID matters.
- FT8: No report

New Business

- Back to Basics: John W2JLH suggested a FLARC "Back to Basics" operation of using wire antennas and no more than 100 Watts from your local municipal park. CW operation was strongly encouraged, followed by phone, and digital modes. More information to follow.
- Special Interest Groups ... Jim W2JC reports there is a Special Interest Groups link on the left side of the web site and that there is daily activity amongst the groups. A new slack.com real-time text chat channel was set up by Nomar NP4H and was actively used by members during the Winter Field Day activity. It is open 24/7 for member chat. Contact Nomar for access.
- Health & Welfare: Reminder to all... Stay safe and healthy and general VAX chatter.

Motion to Close and Adjourn:

- Proposed by Karl W2KBF and seconded by Judy KC2TLM at 9:05 pm.

Respectfully submitted February 6, 2021

Tom McCabe N2AXX